

TY-300 Direct-To-Film Printer

Master Sales Guide

THE NEW
TY-300

Next-Generation
Direct-To-Film Printing
Performance. Productivity. Profits.





The TY-300 is a best-in-class DTF (direct-to-film) printer that combines the rich color, fine detail, high image quality, high productivity, and cost performance required by custom apparel businesses.

Table of Contents

Need to Know.....4

Product Purpose..... 5

Target Markets.....6

Product Features7

Ink Consumption..... 13

Operating Environment.....15

VersaWorks.....16

Applications..... 18

Print Speeds..... 20

Specification.....22

What You Need To Know

The Roland DG TY-300 is a state-of-the-art direct-to-film (DTF) printer designed to meet the diverse needs of apparel professionals. Its standout features include:

- Newly developed printheads deliver precise details, capturing fine lines, small text, and intricate designs with remarkable clarity. The True Rich Color 3 setting ensures vibrant and natural color reproduction, enhancing the visual appeal of printed apparel.
- The TY-300 supports printing on film then transferring to a wide range of fabrics, including cotton, polyester, denim, nylon, and rayon, accommodating both dark and light materials. This versatility allows apparel professionals to expand their product offerings and cater to diverse customer preferences.
- Utilizing the newly developed S-PG2 inks, the TY-300 offers high-quality output with reduced ink consumption. Enhanced maintenance features minimize waste during cleaning, contributing to overall cost savings.
- The printer includes automated cleaning functions to prevent nozzle clogging and allows users to easily replace components such as caps, wipers, and flushing sponges. These features reduce downtime and maintenance costs, ensuring consistent production.
- The TY-300 also comes with Roland DG's industry-best customer service and support as well as a One-Year Trouble-Free Warranty. Your success is our success, so you can rest assured we'll be with you every step of the way to make sure you are fully satisfied with the performance of your Roland DG device.



TY-300 with optional shaker/ oven (sold separately).

Pricing

TY-300 - **\$19,995 MSRP**

SPG2 - CMYK ink **\$99.99** (500 ml)

SPG2 - White ink **\$84.99** (500 ml)

S-POWDER-5K - **\$119.99** (5kg)

S-F328-30 – 30" x 328' Cold Peel DTF Film - **\$299.99**

RDTFS800 – Inline Powder, Shaker, Dryer with included fume extractor - **\$6,795**

Powerful Roland DG VersaWorks 6 RIP software included

Product Purpose

Background

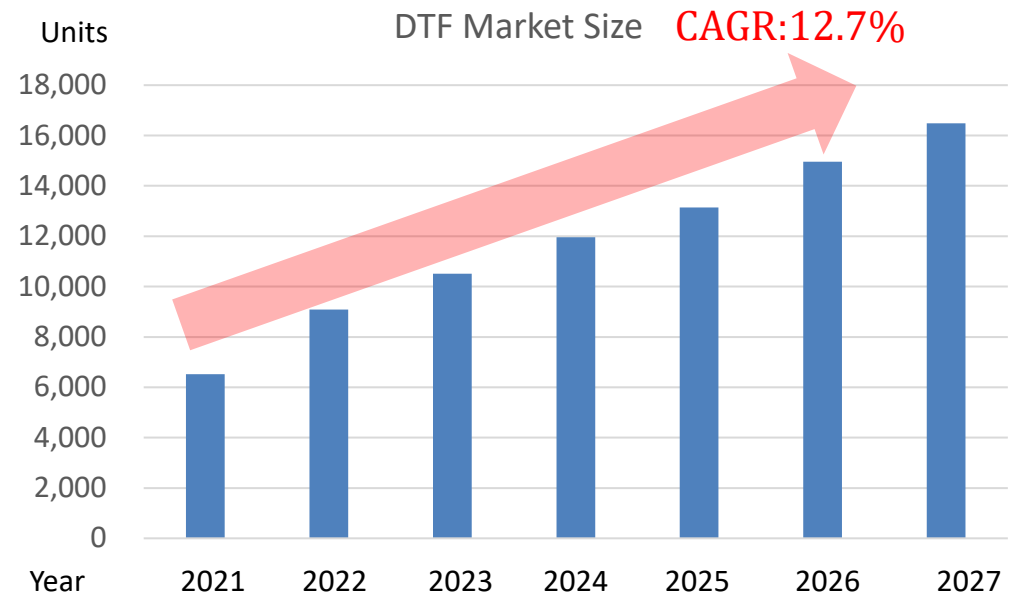
- The decorated apparel print market continues to grow while the methods used to achieve finished products continue to evolve. The market for DTF-specific devices is very strong, and we see an opportunity to obtain significant market share for 30-inch output devices.
 - Fashion and Apparel
 - Sports and Fitness
 - Corporate Branding
 - Entertainment and Media

Objective

- Provide a high-productivity solution for users needing large-volume output with excellent print quality.
- Expand the DTF user base by adding in more industrial and corporate applications.

Goal

- Penetrate the higher-volume decorated apparel market with an eye on future growth based on CAGR of 12.7%.



Target Markets

Fashion and Apparel

Custom Clothing Brands:

- Small and medium-sized fashion labels use DTF to create unique, high-quality prints on clothing.
- Streetwear: Popular for bold designs, gradients, and vibrant colors that stand out.
- Athleisure: Used for decorating yoga pants, hoodies, and other casual activewear.

Sports and Fitness

Team Uniforms:

- For printing logos, numbers, and names on jerseys and other gear.
- Gym Wear: Custom branding for fitness apparel and accessories.

Corporate Branding

Promotional Apparel:

- T-shirts, polos, and jackets for giveaways or employee uniforms.
- Event Merchandise: Used for conferences, trade shows, or company-sponsored events.

Entertainment and Media

Concert Merchandising:

- Band T-shirts, hoodies, and tour memorabilia.
- Fan gear
- Apparel for TV shows, movies, and celebrities.

E-commerce and Small Businesses

Print-on-Demand Services:

- Ideal for startups offering customized T-shirts, bags, and more.
- Etsy Sellers: Independent creators use DTF for detailed, colorful designs.

Education and Institutions

School Spirit Wear:

- Hoodies, T-shirts, and hats for students, staff, and alumni.
- Team Apparel: Custom gear for sports teams, clubs, and organizations.

Hospitality and Retail

Uniforms:

- Used for branding staff uniforms in restaurants, hotels, and retail stores.
- Aprons and Hats: Popular for café and bakery branding.

Product Features - SPG2 Inks

The **S-PG2 DTF inks by Roland DG** offer several advantages for apparel decoration and customization, making them a popular choice for high-quality direct-to-film printing.

High-Quality Prints

- The inks produce rich, vibrant colors, enhancing the visual appeal of printed designs. **Excellent Detail Reproduction:** Ideal for intricate designs and fine details, making them suitable for high-resolution graphics.

Versatility

- **Wide Substrate Compatibility:** Can be used on various fabrics, including cotton, polyester, blends, and even dark-colored materials. **Flexible Applications:** Suitable for fashion, uniforms, promotional apparel, and more.

Durability

- **Long-Lasting Prints:** The inks create prints that resist cracking, fading, and peeling, even after repeated washing. **Robust Adhesion:** Ensures strong bonding to the substrate, increasing the longevity of designs.

Ease of Use

- **Streamlined Workflow:** Designed to work seamlessly with Roland DG equipment, ensuring consistent results and reducing downtime. **Low Maintenance:** The inks help prevent clogging in printheads, ensuring smooth, trouble-free operations.

Cost-Effective

- **Efficient Printing:** High yield and efficient ink usage minimize waste, making the printing process more economical. **Reduced Need for Pretreatment:** S-PG2 inks require minimal fabric pretreatment, saving time and effort.



Product Features - Integrated Contour and Sheet Cutting

Integrated Contour Cutting

Only Roland DG's DTF solutions feature an integrated plotter/cutter head, fully compatible with the complete range of Roland DG blade holders and cutter blades.

This unique design enables them to operate as either a combination Print & Cut device or a stand-alone plotter/cutter, providing unmatched versatility.

Both operation modes are seamlessly supported through Roland DG's intuitive software workflows, including the powerful VersaWorks RIP software.

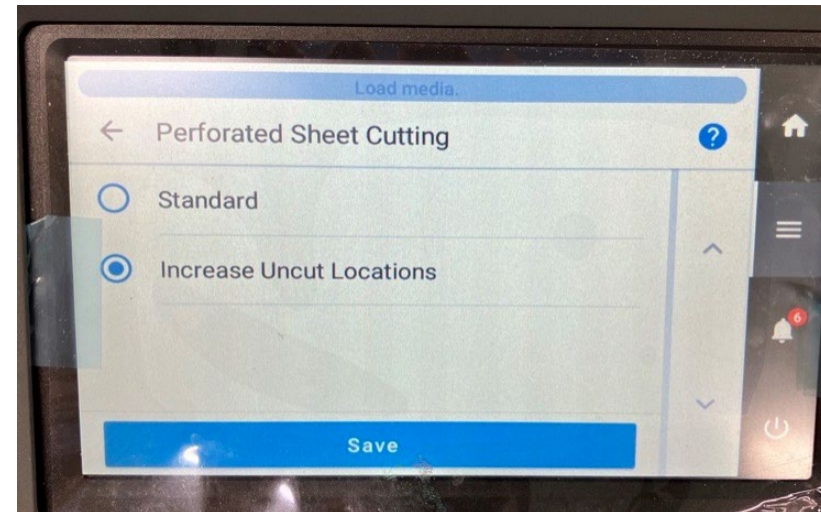
The TY-300, like the BY-20, effortlessly switches between DTF and HTV applications without requiring any user reconfiguration. Simply load the appropriate media, select the correct cutter blades, and apply the recommended settings.

Perforated Sheet Cut

A great production tool available on the TY-300 is the ability to perform a perforated sheet cut between print jobs.

This features eliminates the need for manual trimming horizontally while allowing print jobs to remain intact for roll-to-roll printing.

The user removes the printed roll when complete and can simply tear the individual gang sheets or large run job without the need to use a blade to trim.



Product Features - Specially Designed Shaker

Designed to meet the specific requirements for the TY-300, the RDTFS800 pairs up perfectly to achieve high-quality, production-level output. Roland DG provides specific settings to pair the devices in any print mode with perfect finishing results.

Dual catch trays allow for long run, unattended printing from roll-to-roll for optimized production efficiency.

Included with an alignment fixture to ensure perfect prints even on full roll unattended printing and simple set up.

Built-In fume extraction system to save space while providing user safety requirements.



Product Features – Shaker/Heater



Powder input
Cover & Tray



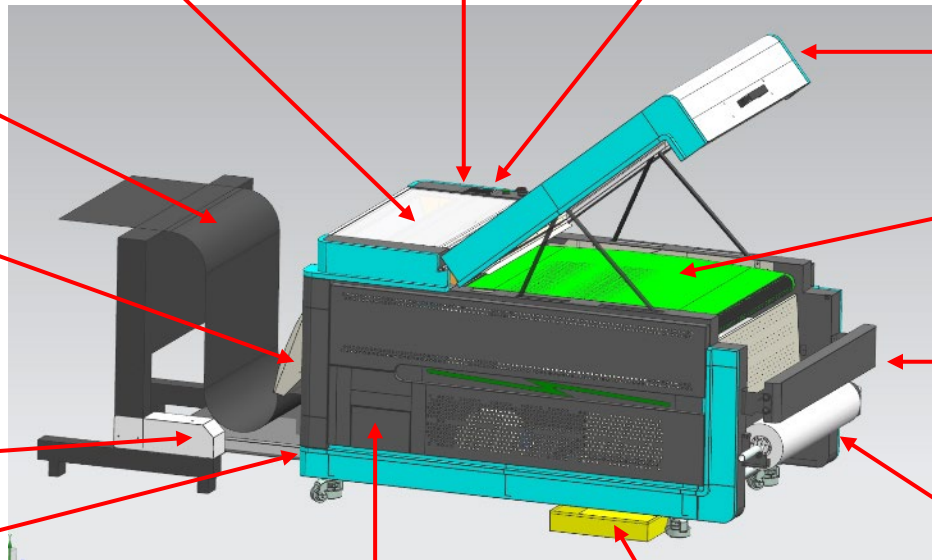
Power &
Emergency Stop

LCD User
Interface



Master Power
& Reset Switch

Status Light



Media Film
input flow

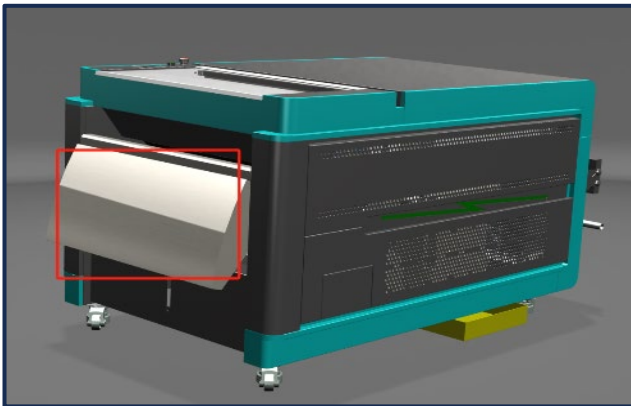
Media Heater
Platen

Printer to
Shaker
Alignment Jig

Product Features – DTF Process

- The film exits the printer and is guided into the shaker unit via the pre-heater platen. Once inside, the printed film undergoes a dusting and powder application process in the powder bin.
- Excess powder is collected in dual trays and recycled into the top hopper for reuse.
- The powdered film is then transferred to the heating section, where it travels along the platen.
- Under heat, the powder melts and solidifies onto the film.
- As the solidified film exits the heater section, it is cooled by an exit media fan and wound onto the media take-up unit. The completed roll of film can then be removed, ready for final distribution and heat pressing.

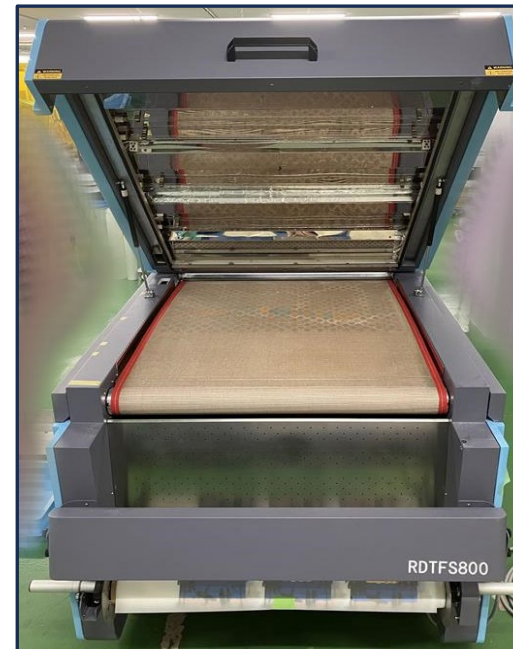
Film Heater Platen Pre-heating.



Powder bin and hopper.



Film heater platen and heater elements.

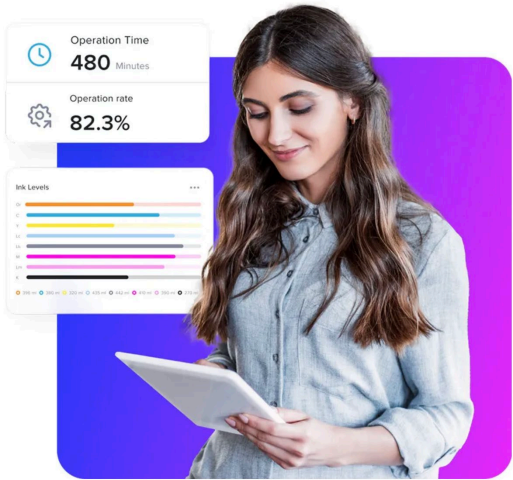
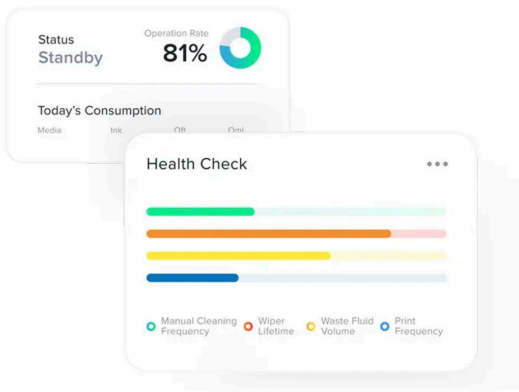


Film cooling fan and Take-Up Winder unit.





Product Features – Roland DG Connect

- Roland DG Connect provides users with a dashboard view of all printers in their production environments. This app offers powerful, easy-to-use tools that minimize downtime by tracking necessary maintenance and consumable replacements, while supplying real-time statistics on all printers being used.
- A business dashboard allows for monitoring printer output and calculating overall job costs. Roland DG Connect is a constantly evolving system where new time-saving and convenience features will be added on a regular basis.



Device Dashboard	Business Dashboard	Monitoring Multiple Printers	Health Check
Monitor the device activity to become more efficient with your print production.	Gain insights to the job profitability and costs to keep your business running in top shape.	Easily track the status of Roland DG devices in a single view to maximize productivity.	Run the Roland DG device at an "A-grade" health for a more stable operating environment that reduces downtime.

Ink Consumption – SPG2 Inks

N2A	N5A
	
Size : 1.0 m ²	Size : 1.0 m ²

Mode	Quality	Resolution	Color	Ink Consumption	
				N5A	N2A
Generic Film Dark	High Quality	1200x1200	CMYK	1.83	3.41
			White	20.05	20.05
	Production	900x1200	CMYK	1.74	3.34
			White	17.05	17.05
		600x1200	CMYK	1.85	3.44
			White	13.99	13.99
	High Speed	900x600	CMYK	1.78	3.33
			White	10.49	10.49
	Draft	600x600	CMYK_4pass	1.57	2.97
			White_4pass	7.87	7.87
Generic Film Light	High Quality	1200x1200	CMYK_3pass	1.58	3.02
			White_3pass	7.87	7.87
	Production	1200x1200	CMYK	1.86	3.53
			White	7.08	7.08
		900x1200	CMYK	1.79	3.09
			White	7.87	7.87
	High Speed	600x1200	CMYK	1.81	3.30
			White	5.25	5.25
	Draft	900x600	CMYK	1.70	3.33
			White	3.93	3.93
	High Speed	600x600	CMYK_4pass	1.44	1.78
			White_4pass	7.87	10.49
	Draft	600x600	CMYK_3pass	1.44	2.84
			White_3pass	7.87	7.87

Ink Consumption - Maintenance

Enhanced features for higher reliability and stability:

Automatic Wet Wiping System.

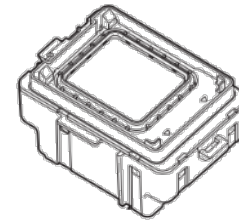
- Prevents ink from hardening on wipers and helps keep printheads clean.

Next-generation S-PG2 Ink.

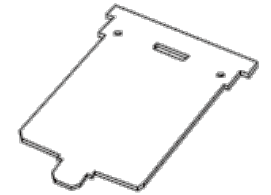
- New DTF-dedicated formulation prevents ink from hardening and allows for stable printing.

New Automatic Maintenance Sequence.

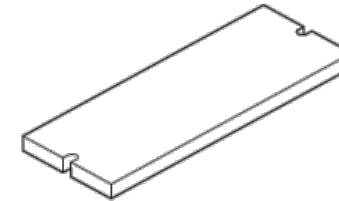
- Optimized automatic maintenance sequences ensure stable printing.
- New maintenance fluid prevents ink from hardening around the cap top.
- The nozzle surface can be cleaned by using a new manual maintenance kit and performing a start-up cleaning.
- User-replaceable parts, including Printhead Cap, Wipers, Flushing Sponge, and Wiper Units, make operation and maintenance more cost-effective and self-reliant.



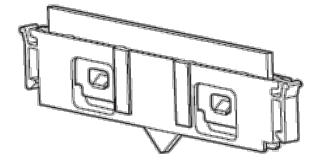
Printhead Cap



Wiper Cleaner



Flushing Sponge



Wiper Unit

Operating Environment

The operating environment for DTF technology is a critical factor that customers must understand, monitor, and maintain. The performance and reliability of DTF systems depend on maintaining specific temperature and humidity conditions, regardless of the printer or ink manufacturer:

Key environmental recommendations include:

Operational Temperature: 20 to 28°C (68 to 82.4°F)

Operational Humidity: 40 to 60% RH (no condensation)

Non-operational Temperature: 5 to 40°C (41 to 104°F)

Non-operational Humidity: 20 to 80% RH (no condensation)

It is important to note that these requirements apply to all DTF solutions available on the market and are inherent to pigment-based printing technology.

Roland DG VersaWorks

Whether you need an uncomplicated RIP solution for fast and easy printing, or you're looking to upgrade to the latest, feature-packed RIP software, VersaWorks 6 expands your printer capabilities and maximizes the power of your Roland DG devices.

Roland DG VersaWorks 6 incorporates a multitude of advanced features that make it the most powerful, user-friendly RIP software available today.

Perhaps best of all, VersaWorks 6 is included at no extra cost.



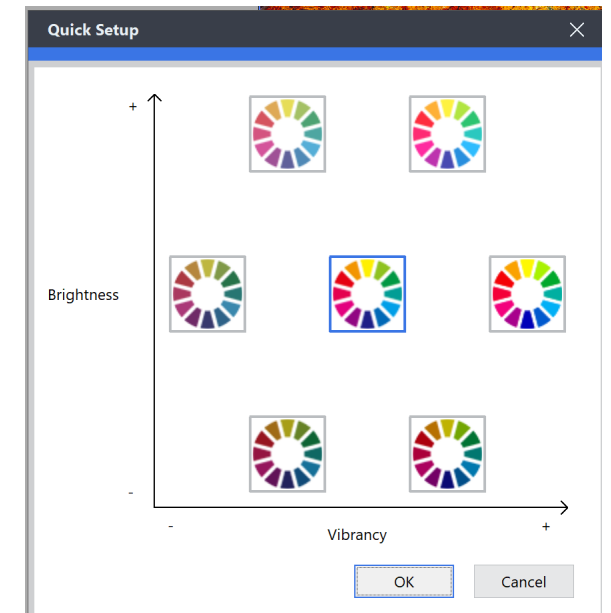
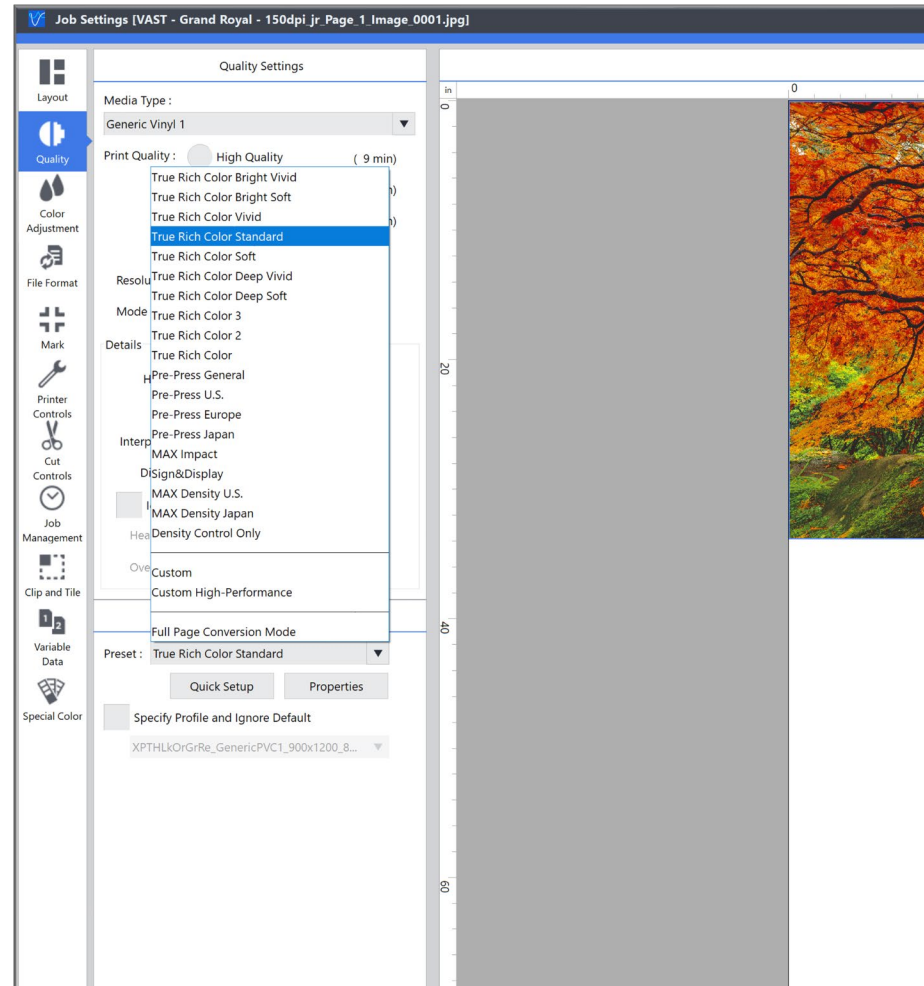
RIP Key Features

- Intuitive user interface with clean and simple, drag-and-drop functionality.
- Five print queues and five hot folders, plus the ability to store unlimited queue settings.
- HARLEQUIN RIP dual-core operation for even faster handling of complex PDF, EPS, and JPEG files for drop shadows and transparencies.
- Keep your color output consistent across multiple printers with new color matching tools – transfer color values to matching Roland DG devices.
- Native 64-bit processing – nest up to 86 jobs and other increased capabilities.
- Run up to four compatible Roland DG devices simultaneously with absolute ease.
- Predictive ink calculator estimates the amount of ink needed, while job log tracks ink use on media.
- Detailed color matching with built-in Roland DG Color System and PANTONE® libraries.
- All the tiling, nesting, variable data, color profiling, and other advanced tools that have made VersaWorks the preferred software of print and graphics professionals.

Product Features – True Rich Color

True Rich Color, a feature highly praised by customers, has been further refined in the TY-300. Building on the foundation of the True Rich Color Standard—designed for natural color reproduction and optimum ink vibrancy—six new settings have been introduced. These settings allow users to adjust the vibrancy and brightness to achieve striking, vivid colors tailored to their needs.

To enhance ease of use, users can conveniently click on an image to select their desired color setting, streamlining the customization process. Additionally, all existing color settings remain available, providing a seamless transition for users accustomed to previous configurations.



Applications

Where Efficiency Meets Versatility

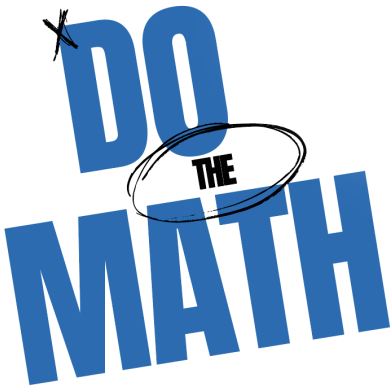
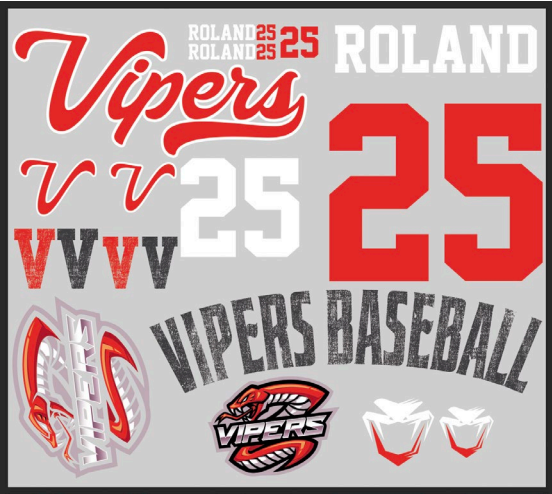
The TY-300 DTF System offers more than just high-volume production and superior image quality — it's a powerhouse of innovation built to streamline your workflow. Equipped with advanced features designed to boost efficiency and enhance operations, this versatile printer excels across a wide range of apparel applications.



Applications

Do the math to find out how much profit your customers can generate.

The best way to sell a business device is by showing how the end user can make money from using that device. We've done the math to demonstrate ROI for several popular, real-world products.

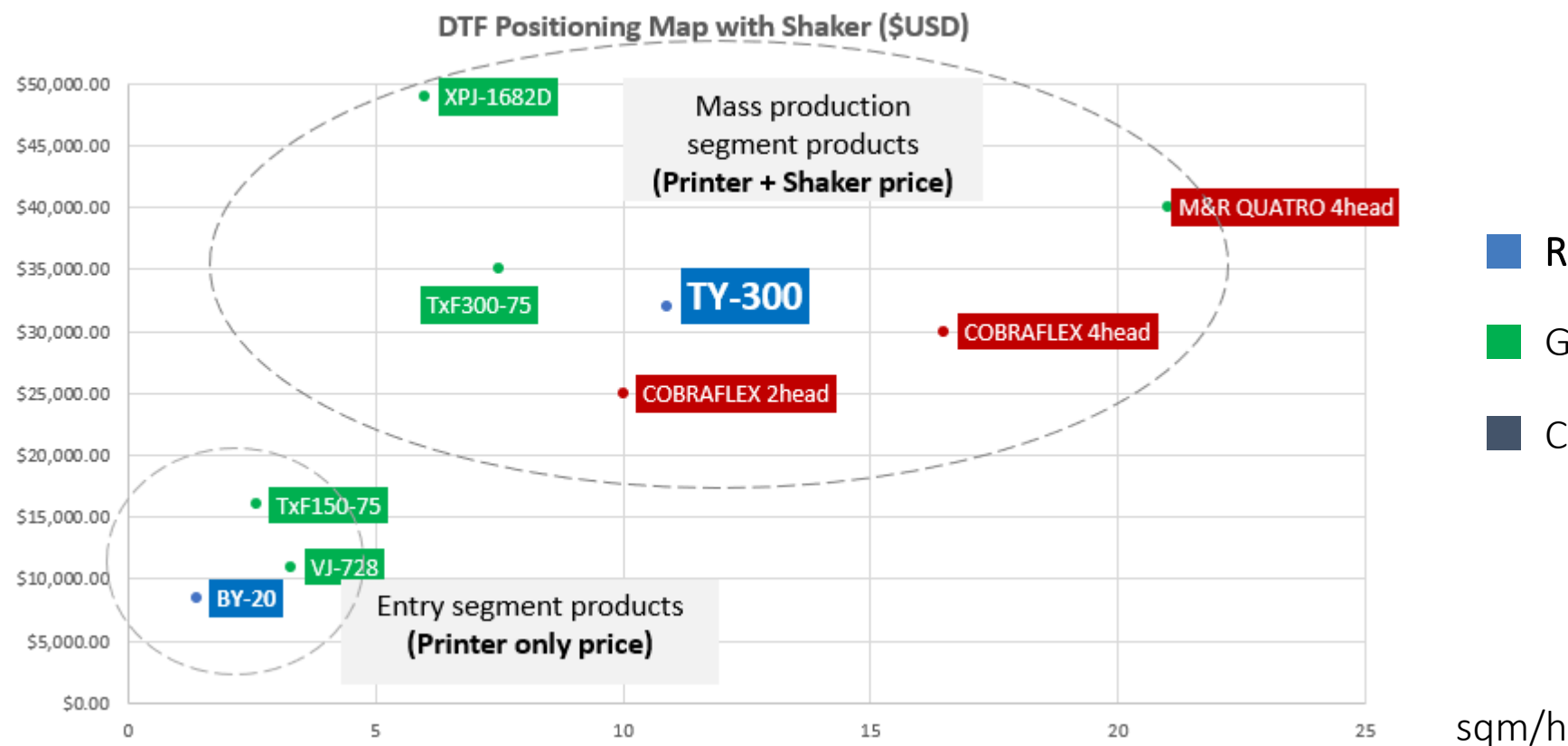


Athletic Set (16"x18") – Jersey, Shirt, Cap, Bag	
Inks	CMYK + White
Time to print	1 minutes per set (16"x18")
Material cost (Film + Powder)	\$.80 (\$0.40/sqft)
Cost of ink	\$.95 (5.27 cc White + CMYK)
Cost of blank items	\$20.00
Cost to produce per Athletic Set	\$21.75
Retail price per Athletic Set	\$100.00
Athletic Sets per hour	60
Profit per hour	\$4,695.00
Profit per day (6 hrs)	\$28,170.00

Print Speeds - CMYK+WH

Media	Quality	Mode	Scan	Feed	Pass	ScanSpeed	Throughput		
			(dpi)	(dpi)	(pass)	(mm/s)	(m ² /h)	(ft/h)	(lm/h)
Generic Film Dark/Light	High Quality	CMYK->White (v)	1200	1200	8	550	4.89	52.65	6.43
		White (v)	1200	1200	8	550	4.89	52.65	6.43
		CMYK->White (v)	900	1200	6	733	8.26	88.88	10.87
		White (v)	900	1200	6	733	8.26	88.88	10.87
	Production	CMYK->White (v)	600	1200	6	1100	10.90	117.33	14.34
		White (v)	600	1200	6	1100	10.90	117.33	14.34
		CMYK->White (v)	900	600	4	733	12.33	132.71	16.22
		White (v)	900	600	4	733	12.33	132.71	16.22
	High Speed	CMYK->White (v) 4p	600	600	4	1100	17.48	188.11	23.00
		White (v) 4p	600	600	4	1100	17.48	188.11	23.00
	Draft	CMYK->White (v) 3p	600	600	3	1100	22.93	246.82	30.17
		White (v) 3p	600	600	3	1100	22.93	246.82	30.17

Competitive Comparison



- Roland DG + Shaker
- Global Printer manufacturer
- Chinese manufacturer

sqm/h

Product Specifications

Content		Description
Product type		Roll-2-Roll, Print & Cut
Head		2 head staggered
Head Layout		Head1: CMYK Head2: WHx4
Printing resolution		Maximum 1,200 dpi
Maximum media size		762 mm
Cutting speed		10 to 300 mm/s
Blade force		30 to 500gf
Blade	Type	CAMM-1 series blade
	Offset	0.000 to 1.500 mm (0.0 to 59 mil)
Ink	Type/Colors	S-PG2 ink (500ml) /C,M,Y,K,Wh
Cleaning Liquid		US-IJ-CL cartridge/SPG2-CL for manual cleaning
Panel		7inch full color touch panel
Sheet cut/Perforated sheet cut		Supported
Drain bottle system		Weight detection
Rated input		100-120 / 220-240 Va.c. 50/60 Hz 6.4/3.0 A
Power consumption	During operation	Approx. 840W
	During standby	Approx. 70W
Environment	During operation	Temperature: 20 to 28 °C (68 to 82.4 °F) , Humidity: 40 to 60 % RH (no condensation)
	Not operating	Temperature: 5 to 40°C (41 to 104 °F) , Humidity: 20 to 80 % RH (no condensation)
Software		VersaWorks 6
Cloud service		Roland DG Connect

Product Specifications - Shaker System

Parameter		RDTFS800 - 800mm Shaker	RDTFS500 - 500mm Shaker	RDTB500 - Table
Working Environment	Power ON (Operating State)	18-30 °C, 24 °C Recommended. Humidity 30%-70%, 50% Recommended.		Optional Shaker table for BY~20 and RDTFS500 to keep product together and aligned for media output.
	Standby mode	400W	400W	
	Power consumption (Operating State)	4000W	3000W	
	Power consumption (standby state)	4000W	3000W	
	Electrical Requirements	AC200-240v @ 50/60Hz, Current = 16A x 1 (Single Phase)	AC200-240v @ 50/60Hz, Current = 13A x 1 (Single Phase)	
Product Size	Length*Width*Height	Length: 1930mm * Width: 1160mm * Height: 1010mm	Length: 1080mm * Width: 1080mm * Height: 625mm	Length: 2000mm Width: 608mm Height: 600mm
	Weight	382kg	144kg	56kg
Package Size	Length*Width*Height	Length 1990 mm * Width 1360 mm * Height 1270 mm	Length 1450 mm * Width 970 mm * Height 850 mm	Length: 1085mm Width: 510mm
	Weight	476kg	195kg	83kg
	Accessories		None	Table
Consumables		HEPA Filter: #300000003 Carbon Filter : #300000002	HEPA Filter: #300000003 Carbon Filter : #300000002	
Maximum feeding speed		>30m2/hr	>30m2/hr	
Media rewinder	Maximum media weight	100kg	100kg	
	Maximum media diameter	200mm	200mm	
Safe design		Emergency stop button open, media and powder sensors.		
Filter/smoke exhaust function		Built-in filter element, user-replaceable, lifespan is about 6 months. Embedded HEPA, user replaceable = ~6-12 months life depending on use.		
Language Support		English, Japanese, Chinese, Korean, Spanish, French and Portuguese as standard. Extra Language @ USD\$285 each one off cost.		
Certification		CE, UL ,PSE [Due end of September 2024]		

תודה
Dankie Gracias
Спасибо شكرًا
Merci Takk
Köszönjük Terima kasih
Grazie Dziękujemy Děkojame
Ďakujeme Vielen Dank Paldies
Kiitos Tänne teid 谢谢
Thank You Tak
感謝您 Obrigado Teşekkür Ederiz
Σας Ευχαριστούμ 감사합니다
Bedankt Beděkujeme vám
ありがとうございます
Tack